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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/736,618

12/17/2003

Yoshihiro Ohkura

X2007.0147

4069

32172

7590

12/27/2005

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EXAMINER

NGUYEN, DILINH P

ART UNIT

PAPER NUMBER

2814

DATE MAILED: 12/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/736,618	Applicant(s) OHKURA, YOSHIHIRO	
	Examiner DiLinh Nguyen	Art Unit 2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/17/05 & 01/5/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Ohuchi et al. (U.S. Pat.6495916) (previously applied).

Ohuchi et al. disclose a surface mount chip package incorporating a semiconductor chip having an integrated circuit, comprising:

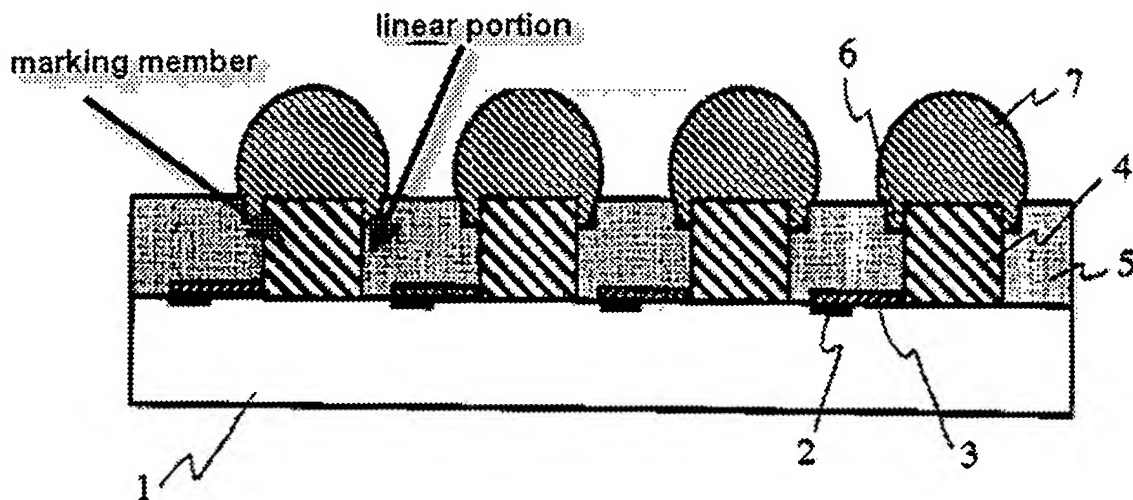
a package housing 5 made of a resin that covers the semiconductor chip 1 while avoiding a plurality of conductors 4 extending from the semiconductor chip 1;

a plurality of external electrodes 7 that are arranged in the package housing 5 in correspondence with a main surface of the semiconductor chip having the integrated circuit and are connected with the plurality of conductors extending from the semiconductor chip; the external electrodes 7 each having a circular shape when viewed in a thickness direction of the semiconductor chip; and

at least one marking member that is arranged in the package housing so as to realize a directivity when viewed in the thickness direction of the semiconductor chip,

wherein an outline shape of the marking member includes at least one linear portion (fig. 1, column 2, lines 56 et seq.).

Fig.1



Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohuchi et al. (U.S. Pat. 6495916) in view of AAPA (fig. 6).

- Regarding claim 3, Ohuchi et al. disclose that the marking member corresponds to a copper post (fig. 1, column 3, line 1) but do not explicitly disclose the marking member is arranged independently of the plurality of conductors. However, AAPA discloses that the marking member 520 is arranged independently of the plurality of conductors (fig. 6). Therefore, it would have been obvious to one having ordinary skill in the art to modify the device of Ohuchi et al. by having the marking member is arranged independently of the plurality of conductors, as taught by AAPA (fig. 6), in order to provide an index solder ball for use for the chip direction (page 2, lines 21-22).
- Regarding claim 4, Ohuchi et al. disclose that the copper post serving as the marking member has a square shape (fig. 1).
- Regarding claim 5, Ohuchi et al. disclose that the copper post is covered with a solder layer 7 (fig. 1, column 3, line 35).
- Regarding claim 6, Ohuchi et al. disclose that the marking member has a square shape (fig. 1).
- Regarding claims 7-9, Ohuchi et al. disclose that the marking member corresponds to a copper post (column 3, line 1) and it would have been obvious to increase in size compared with each of the plurality of conductors 4 (fig. 1).

Moreover, the semiconductor member is increased in size would have been obvious to an ordinary artisan practicing the invention because, absent evidence of disclosure of criticality for the size giving unexpected results, it is not inventive to discover optimal or workable ranges by routine experimentation. *In re Aller*, 220 F.2d

454, 105 USPQ 233, 235 (CCPA 1955). Furthermore, the specification contains no disclosure of either the critical nature of the claimed dimensions of any unexpected results arising therefrom. Where patentability is aid to be based upon particular chosen dimensions or upon another variable recited in a claim, the Applicant must show that the chosen dimensions are critical. See *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed, Cir. 1990).

Response to Arguments

Applicant's arguments filed 10/7/05 have been fully considered but they are not persuasive.

The applicant argues that Ohuchi et al. do not disclose the external electrodes each having a circular shape when viewed in a thickness direction of the semiconductor chip and an outline shape of the marking member includes at least one linear portion.

Applicant's arguments have been fully considered but they are not persuasive because Ohuchi et al. clearly disclose the package comprising the external electrodes 7 each having a circular shape when viewed in thickness direction of the semiconductor chip and wherein an outline shape of the marking member includes at least one linear portion (fig. 1, column 2, lines 56 et seq.).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DiLinh Nguyen whose telephone number is (571) 272-1712. The examiner can normally be reached on 8:00AM - 6:00PM (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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DLN

A handwritten signature in black ink, appearing to read 'Hoai Pham', with a long horizontal flourish extending to the right.

HOAI PHAM
PRIMARY EXAMINER